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III. REMARKS

1. Claim 1 is amended to correct a spelling error.
2. Claims 1, 8, 10, and 19 are patentable over Cahill (US 5,287,556) in view of Liu (US 6,778,594) under 35 U.S.C. §103(a).

The combination of Cahill and Liu does not disclose or suggest each feature of Applicant's invention as recited in the claims.

Applicant's invention is directed to a method for tuning a complex filter. The filter has at least one variable time constant by which the location of at least one pass band of the filter can be changed. In the tuning of the filter, at least one reference signal, comprising an in-phase component and a quadrature phase component, is used as an input to the filter. Claim 1 recites "changing the frequency of said at least one reference signal." This is not disclosed or suggested by the combination of Cahill and Liu.

Cahill relates to interference reduction using an adaptive receiver filter, signal strength, and bit error rate (BER) sensing. The radio receiver of Cahill comprises a variable passband received channel filter to reduce interference. The variable passband received channel filter is implemented for both in-phase and quadrature phase branches. However, there is no disclosure in Cahill of changing a frequency of a reference signal, as claimed by Applicant. Rather, Cahill relies on measurement of the bit error rate to adjust a passband of the filter.

The portion of Cahill referred to by the Examiner, (Col. 4, line 55- col. 5, line 25) discloses that a selection is made from a "range of receiver filter passbands" to optimize BER when a poor BER and a strong signal are received simultaneously. Selecting from

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a range of receiver passbands is not the same as changing the frequency of a "reference signal" that comprises an in-phase component and a quadrature phase component and is used as an input to a filter, as is claimed by Applicant. Cahill changes the passband of the filter, while Applicant's invention recites changing a "frequency" of the "reference" signal. The two are not the same, and at least this feature of Applicant's invention is not disclosed or suggested by the combination of Cahill and Liu.

Also, the combination of Cahill and Liu does not disclose or suggest "determining, on the basis of the measurement on the strength of the output signal of the filter, the location of the pass band of said filter." In Applicant's invention, the change in bandwidth depends directly on the signal strength measurement. This is not the case in Cahill. The measurement data of Cahill is only used to determine whether the signal strength is high enough. Cahill relies on a bit error rate to adjust the passband of the filter, not the measured strength of the output signal of the filter.

In Cahill, the received signal strength indication (RSSI), from energy estimator 127 (see FIG. 1), is compared to a RSSI threshold. If the RSSI exceeds the RSSI threshold, a test is made to determine if the BER exceeds the BER threshold. (Col. 4, line 65 to Col. 5, line 9). Measurement of the BER is accomplished by testing the path metric output of the Viterbi decoder. (Col. 5, lines 10-12). If the BER exceeds the BER threshold, the "passband of the received channel filters 113 and 115 are reduced by one passband increment." (Col. 5, lines 16-18). Thus, in Cahill, the change in bandwidth of the passband filter is not made directly on the basis of the signal strength measurement, as in Applicant's invention, but rather on the basis of a BER measurement. This is clearly not the same as what is claimed by Applicant, where the determination of the location of the passband of the filter is made on the basis of the measurement of the "strength" of the "output signal" of the filter. Thus, this feature is not disclosed or suggested by Cahill.

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Liu does not overcome the noted deficiencies of Cahill. Liu discloses a low IF receiver having a polyphase (complex) filter. In the receiver of Liu, the low IF signal is digitized by A/D converters and filtered by the polyphase filter. The outputs of the polyphase filter are processed by a digital I/Q demodulator. There is no disclosure in Liu of determining of the location of the passband of a filter on the basis of the measurement of the **"strength" of the "output signal" of the filter**. Thus, Cahill in combination with Liu, does not disclose or suggest each feature of Applicant's invention as claimed. Therefore, claims 1, 8, 10 and 19 are patentable over the combination of Cahill and Liu.

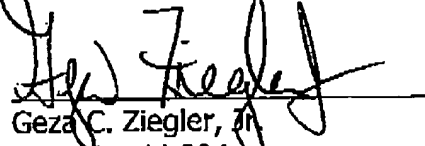
3. Claims 2-6 and 11-17 are patentable over Cahill and Liu in view of Ford. As noted above, Cahill in view of Liu does not disclose or suggest each feature of Applicant's invention. Ford does not overcome the above-noted deficiencies for the reasons previously set forth. Therefore, claims 2-6 and 11-17 should at least be allowable by reason of their respective dependencies.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

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The Commissioner is hereby authorized to charge payment of \$120.00 for a one-month extension of time and any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


Geza C. Ziegler, Jr.
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20 FEB 2006
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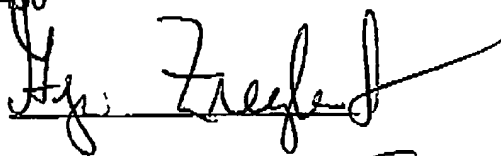
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